Product Specification Sheet

Myeloperoxidase antibody

Cat# MPO11-M | Mouse anti-Human Myeloperoxidase monoclonal antibody | **SIZE**: 100 µg

Myeloperoxidase (MPO) is a peroxidase enzyme that in humans is encoded by the MPO gene on chromosome. MPO is most abundantly expressed in neutrophil granulocytes (a subtype of white blood cells), and produces hypohalous acids to carry out their antimicrobial activity. It is a lysosomal protein stored in azurophilic granules of the neutrophil and released into the extracellular space during degranulation. MPO has a heme pigment, which causes its green color in secretions rich in neutrophils, such as pus and some forms of mucus.

The 150-kDa MPO protein is a cationic homodimer consisting of two 15-kDa light chains and two variable-weight glycosylated heavy chains bound to a prosthetic heme group. The light chains are glycosylated and contain the modified iron protoporphyrin IX active site. Together, the light and heavy chains form two identical 73-kDa monomers connected by a cystine bridge at Cys153. The protein forms a deep crevice which holds the heme group at the bottom, as well as a hydrophobic pocket at the entrance to the distal heme cavity which carries out its catalytic activity.

Three isoforms have been identified, differing only in the size of the heavy chains. MPO contains a calcium binding site with seven ligands, forming a pentagonal pyramid conformation. One of the ligands is the carbonyl group of Asp 96. Calcium-binding is important for structure of the active site because of Asp 96's close proximity to the catalytic His95 side chain.

Source of Antigen and Antibodies

Uniprot: P05164

Host: Mouse

Clonality: Monoclonal

Isotype: IgG1

Immunogen: Recombinant Human Myeloperoxidase

Purification: Protein G purification from culture supernatant

Species Reactivity: Human

Cross reactivity: Species cross reactivity has not been assessed

Subcellular Location: Lysosome

Recommended Secondary Antibody: Goat anti-Mouse IgG HRP (**ADI cat#40151-HRP)**

Form & Storage of Antibodies

Affinity pure IgG Solution
Concentration: 1 mg/ml Volume: 100 µl
Supplied in PBS, pH 7.4 +0.02% sodium azide
The antibody can be made available carrier free or conjugated to HRP, Biotin, or FITC on request

Lyophilized powder
Lyophilized from a formulation containing PBS, pH 7.4 +3% Trehalose. Reconstitute in 100 µl distilled water to 1 mg/ml

Storage:

Short-term: 4°C for 3 months

Long-term: at –20°C or below in suitable aliquots after reconstitution for 1 year. Do not expose to multiple free/thaw cycles or store working, diluted solutions. Glycerol may be added to a final concentration of 50% and antibodies can be stored un-aliquoted at –20°C.

Recommended Usage

ELISA: Assay dependent concentration. Typically, between 0.5-2.0 µg/ml for capture or 0.1-0.5 µg/ml for detection antibody.

IHC-P: 1-10 µg/ml. QC tested using 10 mM sodium citrate, pH 6 antigen retrieval buffer. The antibody may work better with no retrieval or alternative retrieval solutions.

The above concentrations are a *suggestion*, user's must optimize their assay based on their own conditions.

This product is for In vitro research use only.

Related materials available from ADI

Catalog#	Description
MPO12-M	Mouse Monoclonal Anti-Mouse Myeloperoxidase (MPO) IgG
MPO16-N-5	Human neutorphil Myeloperoxidase (MPO) Purified Protein (>50 U/ml
MPO17-R-50	Recombinant Mouse Myeloperoxidase (MPO) Purified Protein
MYLP11-A	Rabbit Anti-Human Neutrophil Myeloperoxidase IgG
MPO-100	Human Myeloperoxidase ELISA Kit

MPO11-M 190829IA

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